

THE NEW RIVER GORGE AREA ECONOMIC OUTLOOK 2018-2022

New River Gorge Area Economic Outlook

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Executive Summary

The New River Gorge Area saw its nearly four-year bout with recession come to an end during the second half of 2016. After rebounding rapidly just after the Great Recession, employment in the region has fallen sharply over the past four years, driven in large part by severe losses in the coal industry. In this report, we present a detailed discussion of the current state of the New River Gorge Area economy along with our forecast for the likely path of economic activity over the next five years.

Several key facts behind the New River Gorge Area's recent economic performance are as follows:

- **After gaining 4,000 jobs between early-2010 and early-2012, the New River Gorge Area lost roughly 6,500 jobs from that point on until mid-2016.** As a result, total employment in the region reached its lowest level since 1996.
- **The regional economy bottomed out in mid-2016 and has experienced a return to moderate job growth over the past few quarters.**
- All four counties in the region registered weakening economic activity in recent years, but conditions were relatively more difficult in Nicholas and Fayette counties.
- **A large share of the region's job losses were connected to the coal industry's downturn. Mine employment was cut in more than half from early-2012 to mid-2016.** On a positive note, local mine activity and employment have increased over the past year.
- Trade, transportation, and utilities also lost a significant number of jobs in recent years, shedding nearly 10 percent of its jobs since 2007.
- **Unemployment in the region has been volatile in recent years, but overall has not shown consistent improvement since the Great Recession.** Unemployment currently stands at about one percentage point above the state average.
- **The region has suffered significant labor force attrition in recent years.** Overall, the area's work force shrunk by more than 6,000 people percent since 2012.
- **Regional population losses deepened in recent years as the number of deaths outnumbered births by a widening margin and economic turmoil fueled an increase in outmigration.**
- **Per capita personal income has increased only slightly since 2011.** Raleigh County residents have the highest average income levels in the region.

Our forecast calls for the New River Gorge Area to continue its recovery from a lengthy and deep recession. The region should register solid rates of job growth over the next two years or so before gains begin to slow appreciably. Key aspects of our forecast are as follows:

- **We expect employment to increase at an average annual rate of 0.4 percent in the region over the next five years.** Job growth in the region is expected to be at its strongest during the next couple of years.
- **Professional and business services is expected to post the fastest rate of job growth during the outlook period, with a forecast gain of nearly 1.9 percent per year.** Construction, manufacturing and even natural resources and mining will record growth that exceeds the overall regional average.
- Travel and tourism-related industries and healthcare will provide steady job growth for the New River Gorge Area.
- **Unemployment is expected to decline over the next five years,** but will likely remain higher than the state and national averages.
- **Per capita personal income is expected to rise at an annual average rate of 1.8 percent over the next five years.** Government transfer payments will account for a growing share of income in the region during the outlook period.
- **Population losses are expected to continue in the area during the outlook period, but the rate of decline will be smaller compared to the past few years.** All four counties in the region are expected to lose residents, but Fayette County will likely endure the largest percentage declines going forward.

Recent Economic Performance

The New River Gorge Area¹ emerged from its deepest recession in decades during the second half of 2016. The region has experienced a significant amount of economic volatility over the past decade or so, due in large part to ups and downs in the coal industry. Following a strong rebound from the Great Recession between 2010 and 2012, the region went on to see payrolls plunge by roughly 6,500 between early-2012 to mid-2016. These cumulative losses erased all of the gains registered in the four-county area since 2004 and caused the overall level of employment to fall to its lowest point since 1996. Regional employment has increased in each of the last three quarters, though most of the gains have been associated in large part with the bounce in coal production activity.²

PERFORMANCE BY COUNTY With the largest principal city (Beckley) and more than 60 percent of the region's total jobs located within its borders, Raleigh County serves as the New River Gorge Area's economic center. Fayette and Nicholas counties account for most of the area's remaining economic activity. Three of the region's four counties have struggled with sizable job losses since the beginning of 2012. Raleigh County saw the largest absolute drop-off in payrolls during the region's economic downturn, losing more than 3,300 jobs cumulatively (9.4 percent) between the first quarter of 2012 and fourth quarter of 2016.

Nicholas and Fayette counties accounted for a disproportionate share of the area's losses during the recent economic downturn. Indeed, between 2012 and 2016, employers in Fayette and Nicholas counties shed more than 1,700 and 1,600 jobs, or percentage declines of 14 and 19 percent, respectively. In fact, the cumulative job losses in both counties over the last several years have caused total employment levels to fall to depths not seen since the late-1980s. The coal industry has accounted for the bulk of job losses observed in the region's three largest

counties, both directly and indirectly. Indeed, many of the area's fabricated metals shops, machinery equipment manufacturers and business services firms that rely heavily on the industry for business were forced into significant layoffs following numerous mine closures and bankruptcy proceedings for several major coal operators. Summers County has been the region's best performer overall, but gains have stalled over the past few quarters.

Figure 1: Total Employment

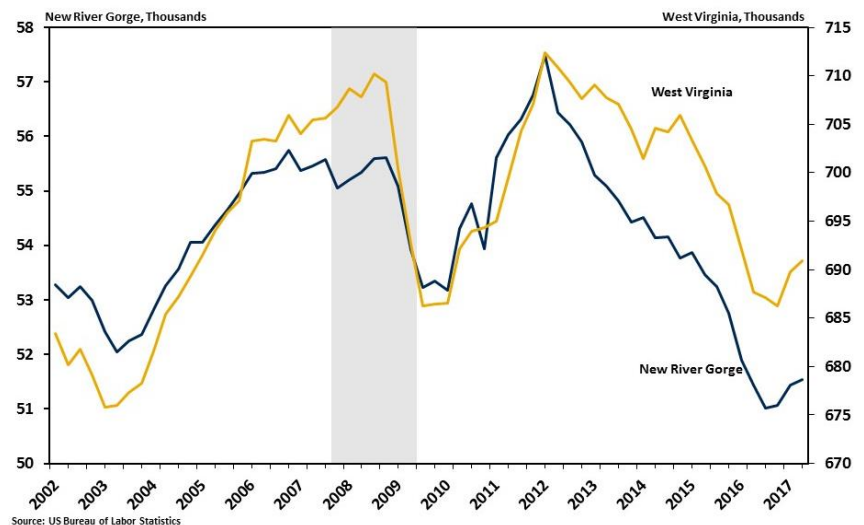
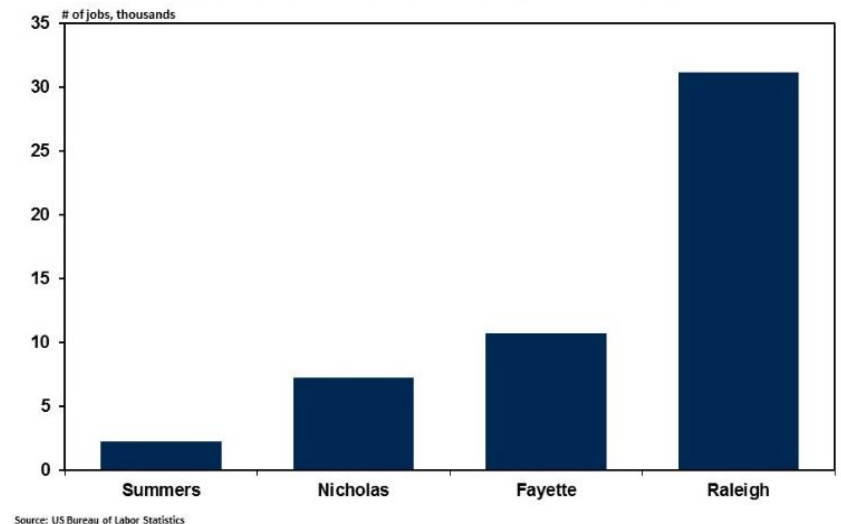


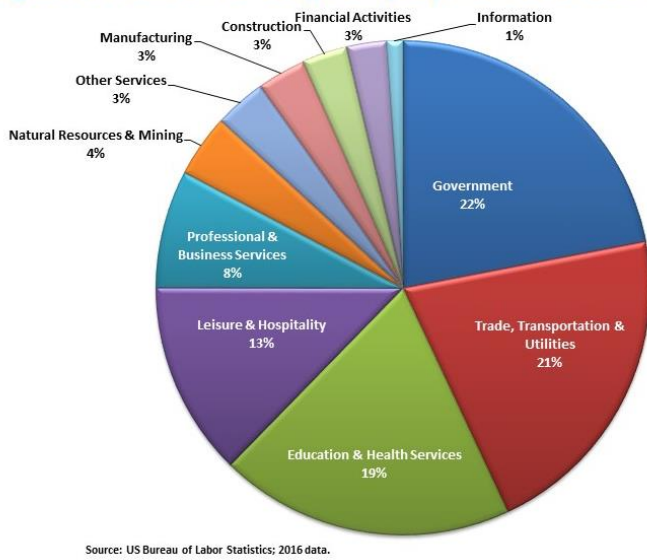
Figure 2: Total Employment by County (2016)



¹ For the purposes of this report, The New River Gorge Area is comprised of four counties: Fayette, Nicholas, Raleigh and Summers counties.

² Sources for historical information are noted in each figure.

Figure 3: New River Gorge Employment Distribution by Sector



TRAVEL & TOURISM Thanks to a wealth of available natural scenic attractions and outdoor-focused activities in the New River Gorge Area, such as whitewater rafting on the New and Gauley rivers, camping, hiking trails, biking, zip-line tours, not to mention the Summit-Bechtel Reserve, travel and tourism clearly plays a major role in the region's economy. Furthermore, the industry accounts for a larger-than-normal share of jobs in the region and has generally been one of the area's few sources of stability, having held onto the jobs added since the end of the US recession in mid-2009 and the region's protracted economic downturn.

SERVICE-PROVIDING SECTORS Trade, transportation and utilities ranks as the largest source of private sector employment in the New River Gorge Area. Unfortunately, the sector has experienced a fairly consistent trend of job losses dating back to the onset of the Great Recession in 2007. The largest portion of these declines can be traced back to the region's retailers. Some of these job losses merely reflect the underlying structural changes affecting many of the nation's brick-and-mortar retailers; however, a shrinking base of consumers, volatile wage growth and the closure of several large stores have helped to push payrolls down by more than 10 percent since mid-2007. Wholesalers and transportation and warehousing firms have also been affected by the decline in the region's retail base over time, but the sharp declines in coal production

and manufacturing activity over the past several years have also hurt these sectors.

The education and healthcare services sector plays a major role in the New River Gorge Area's economy, reflecting in part the region's large share of elderly and/or disabled residents as well as the broader national trend toward an increased footprint for healthcare services. The sector is nearly 5 percent smaller in terms of overall employment compared to mid-2012, but in comparison to other major regional economic sectors, these declines have been modest and healthcare still cause it to contain nearly one out of five jobs in the four-county region. The region's public sector, which had been a relatively stable source of employment, has faced challenging times in

recent years due to declining coal severance and property tax collections.

NATURAL RESOURCES & MINING Even though travel and tourism represents an identifiable strength of the New River Gorge Area's economic base, a substantial portion of the four-county area's economic heritage can be traced to coal mining and other resource-based industries. As of 2016, natural resources and mining accounted for just 4 percent of the region's jobs, but the sector's relative capital intensity causes it to account for roughly three times that share of the New River Gorge Area's overall economic output. The sector pays roughly double the local average annual wage.

Unfortunately, the area's coal industry has faced major structural changes in the electricity generation market (i.e. emergence of natural gas) and environmental regulatory changes over the years that have heavily affected production. In addition, geological limitations represent a consistent roadblock as decades of heavy mining have fully depleted some coal reserves or left some seams too thin or fragmented to extract profitably at market prices. Finally, the industry's protracted weakness caused several of the area's major mining companies, Arch Coal, Alpha Natural Resources, Walter Energy and Patriot, to enter bankruptcy proceedings or other forms of financial reorganization over the past few years, leading to the closing of several mines in the area.

Raleigh, Fayette and Nicholas counties ranked 6th, 12th and 17th, respectively, in terms of production statewide during 2016, with the area's mine output totaling just over 5 million tons. This marks the New River Gorge Area's lowest annual coal output in decades and a 52 percent drop just from 2014. Coal employment fell by a similar magnitude at region mining operations, with mine payrolls averaging approximately 1,900 workers for 2016 as a whole, down from nearly 3,700 in 2012.

Over the past few quarters, the coal industry, both locally and across much of the US, has enjoyed a solid bounce in activity. An increase in coal use by domestic power plants and rising export demand for thermal and metallurgical coal have boosted production at several major mines in the region and allowed a few new smaller operations to open. Indeed, after bottoming out in the third quarter of 2016, production and payrolls at area mines have increased by 41 and 21 percent, respectively. This puts both metrics back in line with levels seen during 2015.

CONSTRUCTION & MANUFACTURING Aside from the boost created by the Summit Bechtel Reserve development and a few infrastructure projects during the 2010 to 2012 timeframe, the New River Gorge Area's construction sector has experienced a prolonged downturn, with local construction companies shedding roughly 600 jobs on net since the beginning of 2012. New home construction in the four-county area remains at weak levels in line with the region's economic struggles in recent years. Spending on new nonbuilding construction projects, which consist mostly of infrastructure-related items, has totaled roughly \$25 million over the last 12 months (ending in mid-2017), which is down by nearly half from the already-depressed levels of spending recorded over the prior three years.³

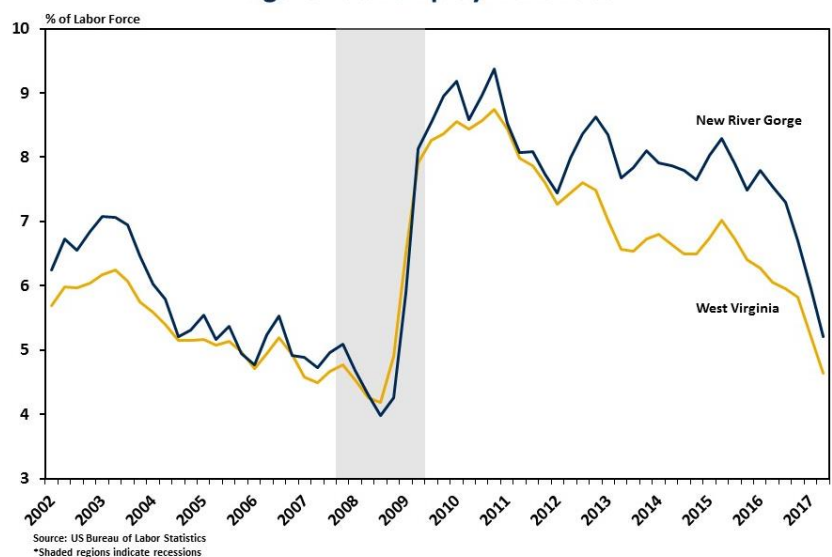
Most of the region's manufacturing base has struggled significantly in recent years. Given their strong linkages to coal mining operations, many manufacturers in the New River Gorge Area have seen demand for their products drop significantly over the past several years. In particular, fabricated metal shops and mining machinery equipment manufacturers have experienced a large drop in shipments and new orders after many mines cut shifts,

idled or even closed operations. The broader national improvement in homebuilding activity has benefited the region's wood products manufacturers to some extent, but those increases have not been sufficient to offset the losses recorded in other industries, leaving the sector with roughly 500 or so fewer jobs compared to the beginning of 2012.

UNEMPLOYMENT After remaining almost in lockstep with the statewide average from 2005 to early-2012, the New River Gorge Area's economic struggles caused the regional unemployment rate to hold at appreciably higher levels compared to the rest of the state. The four-county area's jobless rate has also been quite volatile, bouncing between the low-7 and mid-8 percent range over the course of early-2013 to mid-2016.

Since the third quarter of 2016, however, the regional unemployment rate has fallen sharply, declining from a seasonally-adjusted average of 7.3 percent down to 5.2 percent in the second quarter of 2017—its lowest reading since mid-2009. Unemployment rates vary widely within

Figure 4: Unemployment Rate



the region, ranging from a low of roughly 4.8 percent in Raleigh County to a high of 6.7 percent in Nicholas County as of the second quarter of 2017. All of the counties have recorded sizable declines in their jobless rates over the past several quarters.

LABOR FORCE Reflecting the region's struggling labor market, as well as its underlying demographic trends, the

³ Construction data come from McGraw-Hill Construction.

Figure 5: Unemployment and Labor Force Participation by County

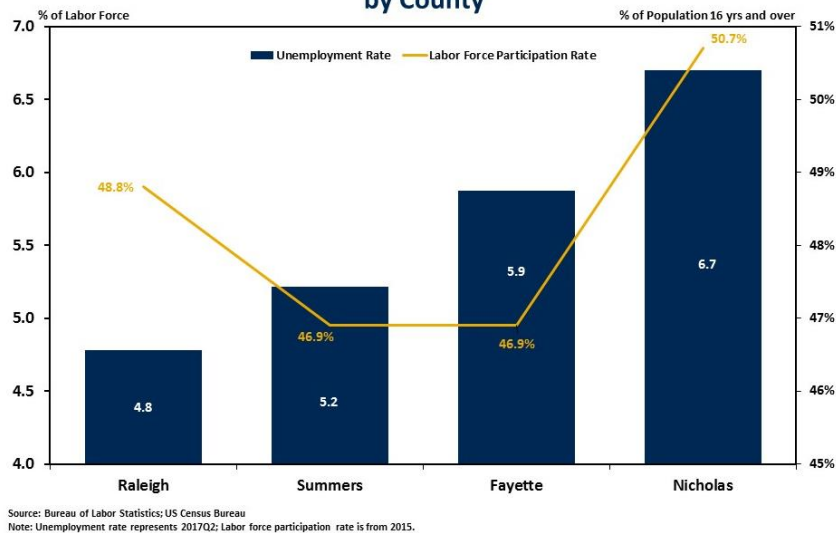
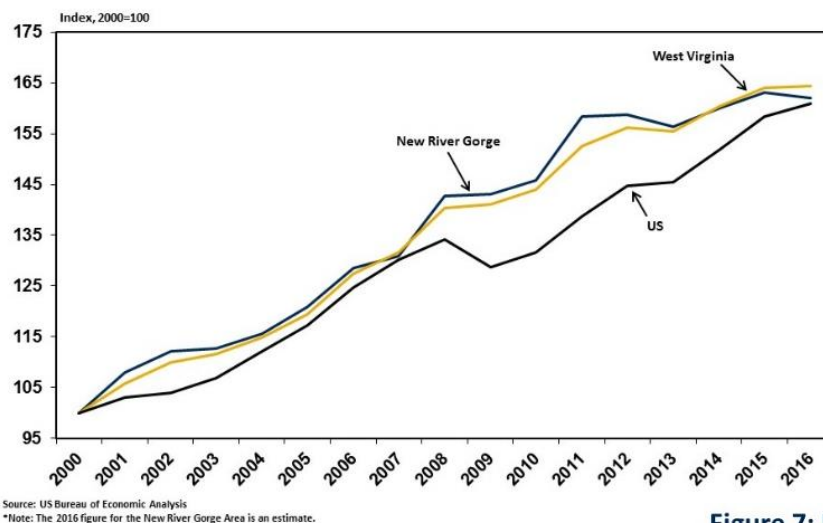


Figure 6: Per Capita Personal Income



INCOME Per capita personal income for the New River Gorge Area is estimated at approximately \$32,800 during calendar year 2016. This marked a 0.7 percent decline from 2015, and leaves overall per capita income for the region just 2 percent above 2011 levels (not adjusting for inflation, as presented in Figure 6). After adjusting for inflation, however, per capita personal income in the region has actually declined by 3.8 percent over this same five-year period, indicating residents have seen their real purchasing power fall measurably in recent years. Despite the region's erratic income changes, the New River Gorge Area has managed to fall in line with statewide and national average gains in per capita income over the past decade.

Raleigh County residents received income levels of approximately \$35,000 per person during 2016, ranking it 18th-highest among West Virginia's 55 counties and roughly 5 percent below the statewide average. The region's three remaining counties have per capita income levels well below the state average, ranging between \$29,600 and \$32,000 in 2016. Per capita incomes in Raleigh, Fayette and Nicholas counties are boosted to some extent by the high wages that are paid to coal miners, but income levels in most of the region are held down by the source of income earned by residents. Indeed, due to a combination of demographic and

New River Gorge Area has recorded significant labor force attrition since 2012. Overall, the region's workforce has declined by more than 9 percent (6,000 people) since 2012. Workforce participation rates are also very low throughout the four-county region. Overall, less than half of the adult population in the area either holds a job or is actively looking for work in the region. Nicholas County is the only county in which more than 50 percent of the adult population is officially part of the civilian labor force. Fayette and Summers County have an equally-low labor force participation rate at 46.9 percent – more than 6 percentage points lower than the statewide average of 53 percent.

Figure 7: Per Capita Personal Income by Area (2016)

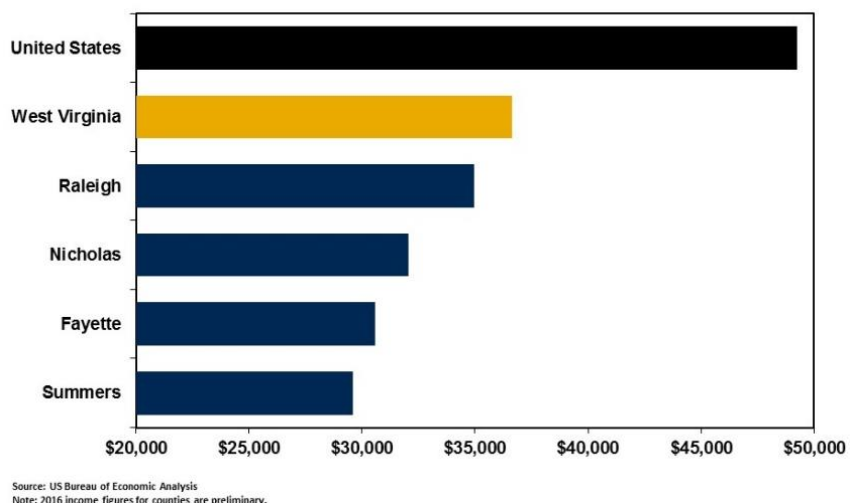
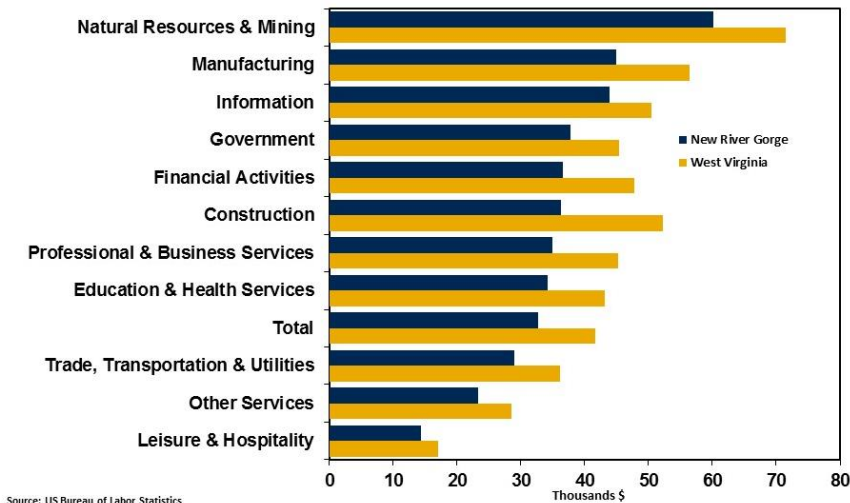


Figure 8: Average Annual Salary by Major Sector (2016)



resulting in a net decline of nearly 6,100 residents since 2012.

DEMOGRAPHIC CHARACTERISTICS Just as with the rest of the state, the size of the New River Gorge Area's population has been negatively affected by deaths consistently outnumbering births. Part of this is due to the area's larger-than-normal share of elderly residents, but also due to higher death rates from a host of issues ranging from heart disease to drug overdoses among younger cohorts living in the region. Finally, the four-county area lags both state and national averages in measures of educational attainment among the adult population, as less than 16 percent of residents aged 25 years and older possess at least a bachelor's degree.

socioeconomic circumstances, federal government transfer payments such as Social Security, Medicare, etc. account for up to 40 percent of total personal income in Fayette, Nicholas and Raleigh counties and nearly 44 percent of total income earned in Summers County.

POPULATION The New River Gorge Area's resident population totals have been quite volatile since the early 1950s, but the region as a whole has seen its resident population steadily decline in number since the mid-1990s and is much smaller in comparison to late-1970s and early-1980s. In fact, the region's resident population total is at its lowest level since 1970. Overall, each of the New River Gorge Area's counties have lost population in recent years,

Figure 9: Summary Population Profiles

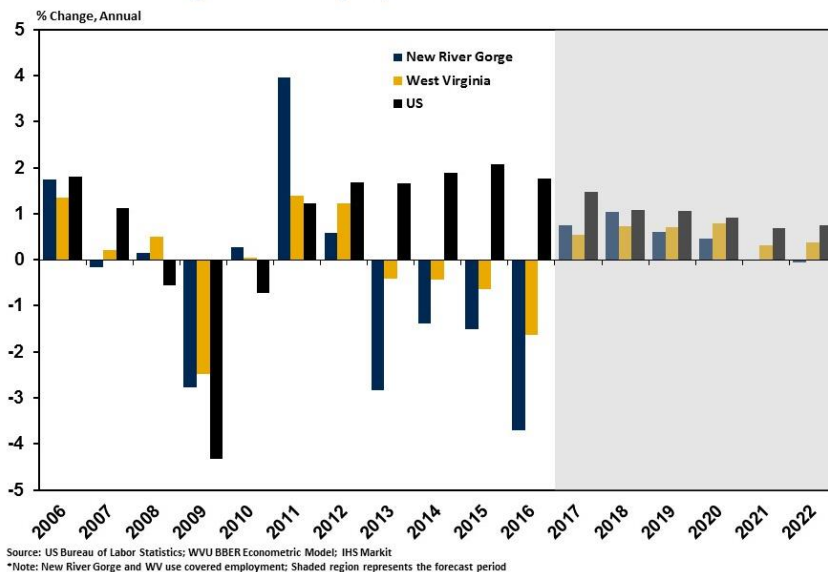
	New River Gorge	West Virginia	United States
Total Population (2016)	159,107	1,831,102	323,127,513
% Population Under 18 (2016)	20.5%	20.4%	22.8%
% Population 65 Years + (2016)	20.1%	18.7%	15.2%
Population with Less than High School Diploma (2015, 25 yrs. +)	17.9%	14.0%	12.8%
Population with High School Diploma, No College (2015, 25 yrs. +)	42.3%	40.7%	27.6%
Population with Some College (2015, 25 yrs. +)	24.2%	25.7%	28.9%
Population with Bachelor's Degree or Higher (2015, 25 yrs.+)	15.6%	19.6%	30.6%
Median Age (2016)	43.4	42.2	37.9
Mean Household Income (2015)	\$52,344	\$56,568	\$78,378
Average Household Size (2016)	2.46	2.49	2.73

Source: US Census Bureau

Economic Outlook

Expectations for the West Virginia and US economy during the 2017-2022 forecast horizon will have a significant impact on the performance of the New River Gorge Area going forward.⁴ The forecast calls for the region to remain on a path to recovery after suffering through a deep, nearly four-year long recession.

Figure 10: Employment Growth Forecast



Overall, we anticipate total employment will increase at an average annual rate of roughly 0.4 percent through 2022. Payrolls are expected to grow at their fastest rate over the first half of the outlook period, increasing at an average annual rate of 0.8 percent through 2019, due in large part to the short-term rebound in the region's coal industry. Growth will slow considerably over the remainder of the forecast horizon, and even with the gains anticipated over the next five years, overall employment in the New River Gorge Area will likely only reach 2015 levels, leaving it well short of the region's 2012 peak.

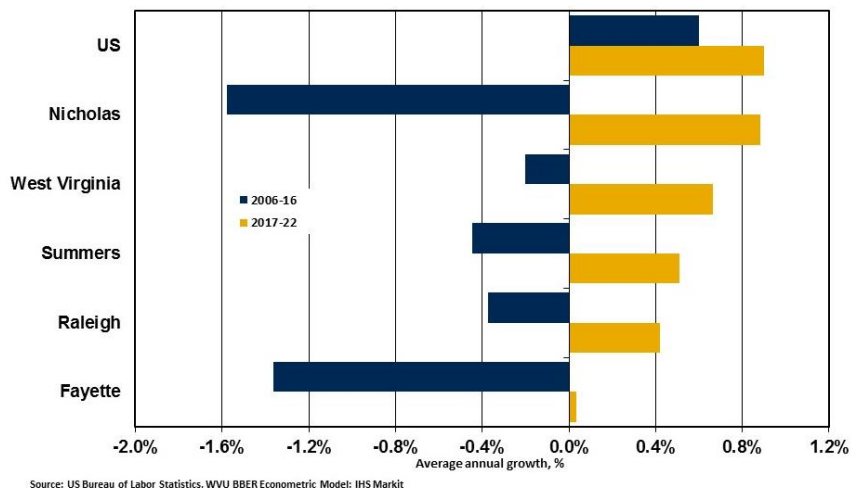
COUNTY DIFFERENCES Among the region's four counties, Nicholas County is expected to realize the fastest pace of job growth going forward (0.8 percent per year) and will slightly outperform the state as a whole. Given the

magnitude of losses the county endured over the last several years, these gains represent a marked improvement for Nicholas County. Flood recovery efforts and a couple of large construction projects account for a portion of the county's growth over the next several years, but Nicholas County is expected to benefit from continued growth in regional tourism, modest hiring within manufacturing and a few service sectors.

Raleigh County is expected to see fairly steady growth over the next five years, but will trail the statewide average with payrolls increasing at a pace of just over 0.4 percent annually through 2022. The county's coal mining industry should continue to see a modest bump in hiring activity, while manufacturing and business services firms will likely see a boost to job growth over the near term as well in response to rising metallurgical coal output. Several other service sectors are also anticipated to record varying levels of new job creation. Summers County is expected to grow at a moderate pace of 0.5 percent annually during the outlook period, though its smaller size

makes this county more likely to depart forecast growth estimates (either above or below) compared to the rest of

Figure 11: Employment Growth Forecast by Area

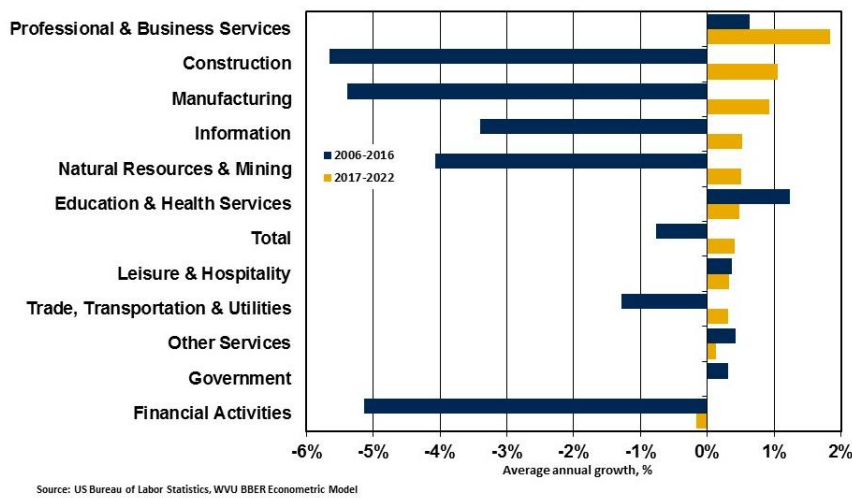


⁴ All forecast estimates presented herein are derived from the West Virginia University Bureau of Business & Economic Research Econometric Model unless otherwise noted.

the region. The forecast calls for Fayette County to see grow only slightly during the outlook, with most of the county’s growth expected to come very early in the forecast. Indeed, the recent upturn in local coal production and employment should slow considerably as global coal markets begin to stabilize. As with other parts of the region, tourism will be a key factor driving the county’s growth over the next five years, but particularly in the build-up to the World and National Scout Jamborees in 2019 and 2021, and should at least offset continued losses in other parts of the county’s economic base.

BUSINESS SERVICES Professional and business services is expected to see the fastest rate of job growth among the New River Gorge Area’s largest sectors over the next five years. Some of these gains will fall in line with broader national economic trends that affect demand for business support functions. However, the rebound in coal output will also benefit the sector as mines hire more contract labor and increase spending on services from engineering firms and other technical support functions.

Figure 12: New River Gorge Employment Growth Forecast by Sector



CONSTRUCTION The construction sector is expected to rank as the second-fastest growing within the region through 2022. These anticipated gains reflect a rebound from the large declines observed over the course of the previous decade, as the region’s residential, nonresidential and nonbuilding construction segments stabilize and eventually record moderate levels of growth. The road bond offers upside potential for the sector’s outlook, as a significant number of projects in the region

have been identified for tens of millions in funding. The actual impact on the region is not entirely clear at present since projects will be assigned a priority and construction will have to be spaced out over several years due to capacity constraints within the sector both locally and statewide.

TRAVEL & TOURISM Leisure and hospitality is expected to grow at roughly the same rate that was observed over the previous decade. The region’s wealth of natural amenities and outdoor recreational activities will remain a strength for this sector going forward and enable tourism-related businesses in the area to benefit from spending by domestic and international tourists alike. In addition, events such as the World Scout Jamboree in 2019 and the the National Scout Jamboree in 2021 will buoy the region’s travel and tourism industry even further. Furthermore, recent discussions by the Governor Justice’s administration to increase the region’s visibility nationally and enhance focus on adventure tourism and other activities available in places such as the New River Gorge

Area could provide upside potential for the sector’s growth going forward. At the same time, some segments of the leisure and hospitality sector that are more heavily linked to local spending patterns, such as restaurants, will face downward pressure going forward as the area’s consumer base is eroded by anticipated population declines and sluggish growth in wage income.

MINING AND MANUFACTURING The New River Gorge Area’s natural resources and mining sector is expected to add jobs at an average annual rate of 0.5 percent between 2017 and 2022. Most of these gains will be concentrated in the early portion of the outlook period as the region’s metallurgical coal operations benefit from heightened steel production in domestic markets due to increased infrastructure spending and enhanced investment in midstream and downstream natural gas capacity throughout the Mid-Atlantic Region. Thermal coal export shipments from area mines are also expected to remain solid over the next couple of years and should offset further losses in domestic demand coming from additional retirements of domestic coal-fired generators in Ohio, Kentucky, North Carolina and other states that source coal from area mines.

The regulatory backdrop appears to pose less of a downside risk compared to the past several years, as the Trump Administration has sought to repeal and/or revise several EPA and other federal agency environmental rules (such as the Clean Power Plan) implemented by the previous administration. Although these rules were not expected to result in further large declines in coal production from the New River Gorge Area, since much of the output is these regulatory policy changes affecting coal use will likely keep a floor under production over the next several years.

In addition, the Department of Energy recently published a notice of public rulemaking (NOPR) that would enable some struggling coal-fired and nuclear power plants to remain open to purportedly maintain reliability and resiliency of the US electrical grid. If the rule is finalized, it could enable some marginal generators that purchase coal from mines in Raleigh or Fayette counties to stay in operation longer. However, the proposed rule has already received significant opposition from a wide range of groups and organizations, meaning it would likely face protracted legal and legislative challenges if it were to become final. Also, future election outcomes could result in the rule being repealed or substantially altered. Finally, even if the rule does become finalized and survive legal challenges, market realities do not favor coal-fired generation over the long term since many coal-fired power plants that would theoretically benefit from the rule are several decades old and have become increasingly expensive to operate relative to natural gas plants and even renewables in some cases.

The New River Gorge Area's manufacturing sector is expected to record job growth of nearly 1 percent per year during the outlook. Given that a sizable share of the region's manufacturers rely on the mining industry for business, particularly fabricated metals and machinery manufacturers, most of the growth will occur during the first half of the outlook period.

OTHER SECTORS Education and health services is expected to add jobs at a 0.5 percent average annual rate through 2022. Healthcare demand is expected to grow consistently within the region, reflecting the region's large share of elderly residents and above-average proportion of individuals with disabilities. The sector has faced

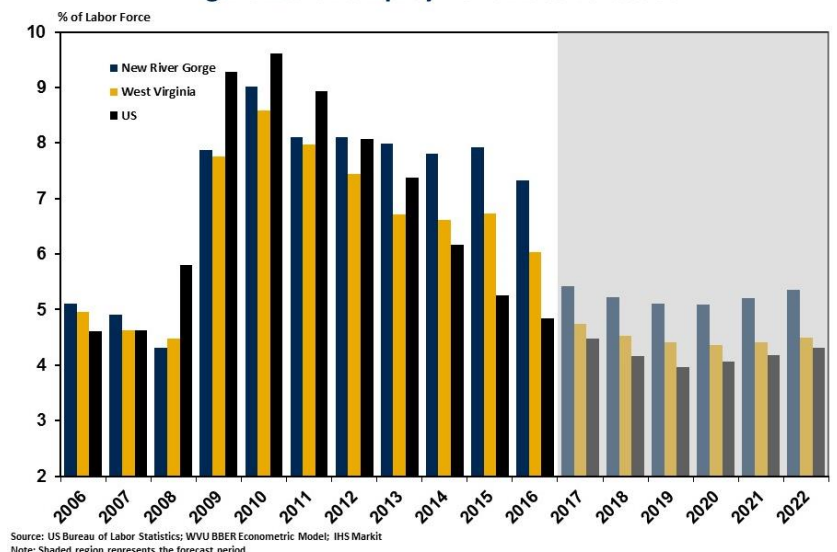
uncertainty over the past year or so as Congress has placed a great deal of emphasis on repealing the Affordable Care Act but has been unable to do so thus far. However, the potential for Congress to change portions of the law remains, and this could foster uncertainty during the outlook period as residents might find their access to insurance coverage placed in jeopardy.

Despite the recent improvements in coal production and expectations for relatively stable production over the next several years, coal severance tax collections will likely remain structurally lower compared to the 2008-2012 time period. In addition, anticipated declines in the four-county area's population will likely contribute to essentially no change in the size of the public sector over the next five years.

The trade, transportation and utilities sector will likely experience modest gains in payrolls through 2022. Coal production is expected to buoy trucking and rail activity for the next couple of years and should help to offset losses in retail trade brought about by a shrinking population base and Amazon and other electronic retailers' ability to capture consumer spending.

UNEMPLOYMENT OUTLOOK Unanticipated changes in labor force participation within the New River Gorge Area's adult-aged labor force could cause the forecast for the regional unemployment rate to differ significantly from both its projected level and path. With that said, the forecast calls for the regional unemployment rate to fall slightly from its current levels and eventually stabilize the

Figure 13: Unemployment Rate Forecast



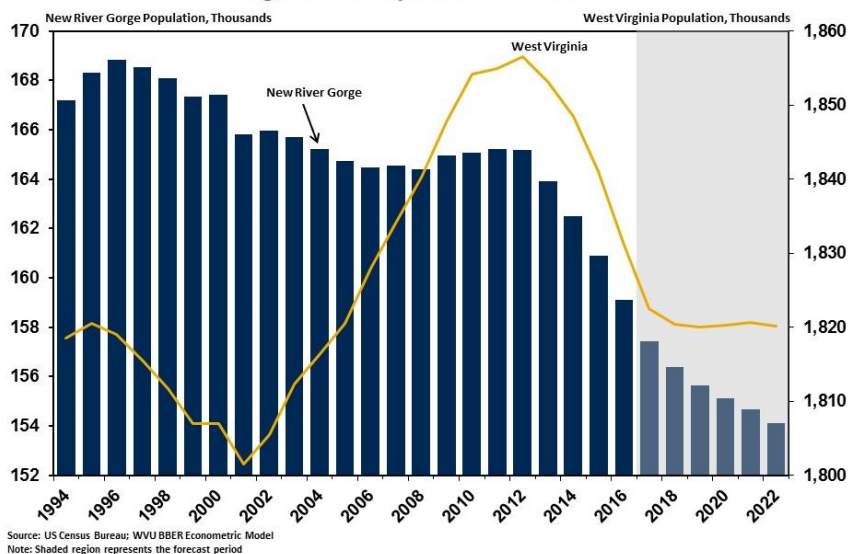
low-5.0 percent range by 2020. The jobless rate will likely remain right around current levels, or could even rise slightly, as improving labor market conditions invite discouraged workers who had exited the labor force to rejoin in the hopes of finding a job.

Raleigh County is expected to have the lowest unemployment rate in the four-county region, holding around 4.8 percent or so through 2020. With an appreciably higher share of residents in older age groups, however, Summers County will see its unemployment rate continue to fall over the longer term. Fayette and Nicholas counties are expected to have jobless rates of around two-thirds to three-fourths of a percentage point higher than the overall regional average throughout the forecast horizon.

county residents originating from federal benefits programs.

POPULATION The region’s population is expected to shrink at a rate of 0.4 percent annually over the next five years. Fayette County is anticipated to record the largest percentage declines in population, as the county’s persistent patterns of net outflows of migration and natural population declines lead it to lose residents at a rate of 0.5 percent per year. Raleigh and Nicholas counties are expected to lose residents, but the overall pace of declines in each county will be significantly smaller in comparison to what has occurred since 2014. Losses will also likely slow down considerably in Summers County going forward as the resident population is expected settle at a level of around 12,600 residents in 2022.

Figure 14: Population Forecast



INCOME Inflation-adjusted per capita income in the New River Gorge Area is projected to increase at an average annual rate of 1.8 percent through 2022, falling mostly in line with the statewide average. A return to job growth in several key sectors will boost real wage and salary gains over the next few years, but the area’s overall limited growth potential in high-paying sectors means growth will slow significantly over the latter half of the outlook period. As is the case statewide, transfer payments will constitute the fastest-growing source of income in the region as further increases in the size of the elderly population bolster Social Security and Medicare payments. In fact, given its age distribution, Summers County is expected to see 45 percent of after-tax personal income earned by